



European Union Network for the Implementation
and Enforcement of Environmental Law

Minimum Content Risk Based Waste Inspection Plan

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Introduction to IMPEL

The European Union Network for the Implementation and Enforcement of Environmental Law (IMPEL) is an international non-profit association of the environmental authorities of the European Union (EU) Member States, and of other European authorities, namely from acceding and candidate countries of the EU and European Economic Area (EEA). The association is registered in Belgium and its legal seat is in Brussels, Belgium.

IMPEL was set up in 1992 as an informal Network of European regulators and authorities concerned with the implementation and enforcement of environmental law. The Network's objective is to create the necessary impetus in the European Community to make progress on ensuring a more effective application of environmental legislation. The core of the IMPEL activities concerns awareness raising, capacity building and exchange of information and experiences on implementation, enforcement and international enforcement collaboration as well as promoting and supporting the practicability and enforceability of European environmental legislation.

During the previous years IMPEL has developed into a considerable, widely known organisation, being mentioned in a number of EU legislative and policy documents, e.g. the 8th Environment Action Programme that guide European environmental policy until 2030, the EU Action Plan: "Towards a Zero Pollution for Air, Water and Soil" on Flagship 5 and the Recommendation on Minimum Criteria for Environmental Inspections.

The expertise and experience of the participants within IMPEL make the network uniquely qualified to work on both technical and regulatory aspects of EU environmental legislation.

Information on the IMPEL Network is also available through its website at: www.impel.eu



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| Executive Summary <p>Recommendation 331/2001/EC indicates the minimum criteria for environmental inspections in the Member States. It specifies that the Member States must ensure the planning of environmental inspection activities and describe them in Environmental Inspection Plans which must be accessible to the public.</p> <p>Art. 34 of the Directive 2008/98/EC states: “Establishments or undertakings which carry out waste treatment operations [...] shall be subject to appropriate periodic inspections by the competent authorities”.</p> <p>As far as waste recycling facilities are concerned, Recital 17 of the Directive 2018/851 states: “In order to provide operators in markets for secondary raw materials with more certainty as to the waste or non-waste status of substances or objects and to promote a level playing field, it is important that Member States take appropriate measures to ensure that waste that has undergone a recovery operation is considered to have ceased to be waste. Such measures should include enforcement provisions to verify that waste that is considered to have ceased to be waste because a recovery operation complies with the law of the Union on waste, chemicals and products, in particular prioritizing waste streams that pose a higher risk to human health and the environment due to the nature and volume of those waste streams, waste that is subject to innovative recovery processes or waste that is recovered for subsequent further use in other Member States.”</p> <p>One of the main issues of the inspection planning is risk assessment. The aim of this report is to adapt the IRAM tool (previously developed within the easyTools IMPEL Project) for the risk assessment within the planning of environmental inspections at waste recycling installations, also defining a standard set of risk criteria.</p> | |



Furthermore, this report is a minimum content Inspection Plan for waste recycling installations, as described in the “Step by step guidance book for planning of environmental inspection” developed by the IMPEL “Doing The Right Things” project (DTRT).

The drafting of the Plan stems from a new approach based on the integration between planning of inspection activities, prevention activities and from the awareness that an effective and efficient inspection system can derive exclusively from strategic planning. It defines the reference context, the priorities, the objectives and available resources.

A high quality of the inspection activity will be achieved through the definition of coherent instructions, working methodologies, control mechanisms and performance indicators. Risk assessment for the prioritization of inspections and Inspection Plan are necessary elements to ensure transparency towards the public and operators, in a sector, such as the waste one, subject to strong corruptive pressures.

This model of an inspection plan can be used as a blueprint for inspection bodies that want to develop an inspection plan for waste recycling installations. Actions to be taken by the inspection body to make a specific inspection plan are marked in orange.

Disclaimer

This report is the result of a project within the IMPEL network. The content does not necessarily represent the view of the national administrations or the Commission.

Quotation

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1. Premise

Article 34 of the “Directive 2008/98/EC of the European Parliament and of the Council of 19 November 2008 on waste (WFD)” states that “establishments or undertakings which carry out waste treatment operations, [...] shall be subject to appropriate periodic inspections by the competent authorities”.

The present plan aims to define the minimum contents of a program for scheduling inspections at waste treatment facilities, based on a risk assessment for setting priorities; it has been prepared in accordance with the requirements defined in the Recommendation of the European Parliament and of the Council (2001/331/EC) of April 4, 2001, which establishes minimum criteria for environmental inspections in the Member States and declines the objective of the above mentioned Article 34 of the WFD delegated to the Inspection Body.

Environmental inspections are a key activity in implementing and enforcing environmental regulations, which is essential for acquiring a high level of environmental protection. The present Plan intentionally limit its scope to waste recovery facilities.

The drafting of the Plan stems from a new approach based on:

- the integration of inspection activity with planning and prevention
- a strategic planning defining the context, priorities, objectives and available resources.

A high quality of inspection reports supported by:

- consistent instructions,
- working methodologies,
- control mechanisms and
- performance indicators.

This strategic approach is the operational framework that gives an answer to the following planning cornerstones:

1. Where are we? - State of the art.
2. Where do we want to go? - Defining macro-objectives based on the mission.
3. How to get there? - Definition of actions and tools.
4. Are we achieving our intended results? - Monitoring and review.

An efficient inspection system is a deterrent to environmental violations because it enables the Inspection Body to detect irregularities and order compliance with environmental regulations.

The Plan calls for the promotion of inspections according to an integrated approach, aimed at verifying the overall environmental impact of an industrial facility or process. Thus, controls are especially oriented to processes, facility characteristics and management, and to pollutant emissions.



The new approach to inspection activity also aims to change the relationship between businesses and public authorities, including by overcoming the logic of command and control, realizing the principle of accountability, always seeking collaborative and constructive confrontation, and valuing good self-monitoring and reporting practices and environmental management systems.

2. Definitions and acronyms

2.1. Definitions

For the purposes of this paper, the following main definitions are adopted:

Environmental inspection: all actions, including site visits, emission control and checks of internal reports and follow-up of related internal and external documents, verification of self-monitoring results, control of techniques used and adequacy of the facility's environmental management, undertaken by or on behalf of the competent authority to verify and promote facilities' compliance with environmental regulations and permits and, where appropriate, monitor their environmental impact.

Routine inspection: environmental inspection carried out as part of a planned inspection program.

Non-routine inspection: an environmental inspection carried out in response to complaints, during investigations of incidents, accidents and violations, or when issuing, renewing or amending a permit.

Inspectorate/Inspection body: Administrative unit responsible for the enforcement of waste management regulations and permits.

Environmental control: the set of activities aimed at determining the set of values, parameters and actions that prevent or may cause an environmental impact of a specific activity, to compare and verify it against environmental regulations and/or issued permits (emission limit values, prescriptions, etc.). Environmental Control includes the operator's self-monitoring and reporting and routine and non-routine inspections by the Inspection Body.

Monitoring: systematic control of an activity on changes in a specific chemical or physical characteristic of an emission, discharge, consumption, equivalent parameter or technical measurement, etc. This is based on repeated measurements and observations at an appropriate frequency, in accordance with documented and established procedures, with the aim of providing useful information.

Self-monitoring: inspections and any control done by the operator of the waste facility.



Environmental regulations: is the collection of laws, regulations, general binding rules, agreements and common law that governs how humans interact with their environment.

Waste: Any substance or object which the holder discards or intends or is required to discard.

Hazardous waste (HW): means waste which displays one or more of the hazardous properties listed in Annex III of Directive 2008/98.

Recycling: means any recovery operation by which waste materials are reprocessed into products, materials or substances whether for the original or other purposes. It includes the reprocessing of organic material but does not include energy recovery and the reprocessing into materials that are to be used as fuels or for backfilling operations. It does not include energy recovery.

Treatment: recovery or disposal operations, including preparation prior to recovery or disposal.

Recovery: any operation the principal result of which is waste serving a useful purpose by replacing other materials which would otherwise have been used to fulfil a particular function, or waste being prepared to fulfil that function, in the facility or in the wider economy.

Backfilling: any recovery operation where suitable non-hazardous waste is used for purposes of reclamation in excavated areas or for engineering purposes in landscaping.

Risk assessment: a systematic process for prioritizing risks based on their impact and probability.

Strategic planning: process in which an organization decide what they want to achieve and the best actions and use of resources for doing this

Indicator: data that allows the monitoring of a process and its evaluation.

Target: level or situation intended to achieve

Waste recovery facilities: waste sorting and recycling facilities that separate and prepare recyclable materials for marketing to end user manufacturers.

2.2. Acronyms

| | |
|-------------|-----------------------------------|
| BAT | Best Available Techniques |
| CDW | Construction and Demolition Waste |
| DTRT | Doing The Right Things |
| ELV | End-of-Life Vehicles |
| EMAS | Eco-Management and Audit Scheme |



| | |
|--------------|--|
| EoW | End of Waste |
| HW | Hazardous Waste |
| IED | Industrial Emissions Directive |
| IRAM | Integrated Risk Assessment Method |
| KEI | Key Environmental Issues |
| NHW | Non-Hazardous Waste |
| PPE | Personal Protective Equipment |
| REACH | Registration, Evaluation, Authorisation and Restriction of Chemicals |
| SVHCs | Substances of Very High Concern |
| WEEE | Waste Electrical and Electronic Equipment |
| WFD | Waste Framework Directive |
| WSR | Waste Shipment Regulation |
| POPs | Persistent Organic Pollutants |

3. The principles of inspection planning

3.1. The Recommendation 331/2001/EC

Recommendation 331/2001/EC establishes minimum criteria for environmental inspections in Member States. It contains non-binding criteria relating to the organization, implementation, follow-up and publication of the results of environmental inspections, thereby strengthening compliance with EU environmental legislation and helping to ensure that it is implemented and complied more consistently in all Member States. Thus, the key role for environmental inspections, which also become an enforcement tool, is further made explicit.

The Recommendation specifies that Member States should ensure advance planning of environmental inspection activities by identifying the minimum contents of Environmental Inspection Plans which should be accessible to the public in accordance with Directive 90/313/EEC.

The following actions are planned: site visits, monitoring compliance with environmental quality standards, inspecting environmental audit reports and statements, checking premises and equipment, checking the suitability of environmental management and of the relevant records.

Criteria are also defined to be met in all site visits, which should promote and deepen managers' knowledge and understanding of relevant requirements of community law, environmental vulnerabilities, and the environmental impact of their activities.

Member States will have to plan their environmental inspection tasks and always have at least one environmental inspection plan covering the controlled facilities on their territory. Such plans may be drawn up at local, regional or national level and must be available to the public.



In summary, the Recommendation contains: the organization and execution of environmental inspections, planning of inspections, routine and non-routine site visits, reports and conclusions following visits, and general-level report on inspection activities.

3.2. The planning cycle of environmental inspections

Planning is part of a cycle of closely related activities that can be grouped into the following 4 macro-actions:

Planning: at this stage (specifically developed in this document), the Environmental Inspection Plan is drafted through the prior definition of objectives and priorities and the definition of the baseline context through accurate information gathering.

A risk-based approach is important to establish the frequency of visits required at sites, which considers e.g., the site's location and receiving environment, the complexity of the operation and the licensee's enforcement history. The steps of the planning activity are shown in the figure below.

Execution of inspections: this phase consists of the implementation of routine and non-routine inspections, and the prior establishment of the necessary tools (operating instructions, protocols, system documents, guidelines, check lists, etc.). Non-routine environmental inspections can be conducted when serious environmental complaints, incidents, accidents or non-compliances occur and in the case of considerable changes of the controlled activity.

Reporting: at this stage the reports are prepared with the results of the inspections conducted, which will be stored in an accessible database. Reports of routine inspections may be published on the internet according to art. 7 c. 2 lett e) of the Directive 2003/4/EC of the European Parliament and of the Council of 28 January 2003 on public access to environmental information.

Evaluation: this phase allows to verify the achievement of the objectives set upstream with the planning, assessing and quantifying them through appropriate indicators, and to make any corrective actions to the Plan and appropriate suggestions for improvement of permits.

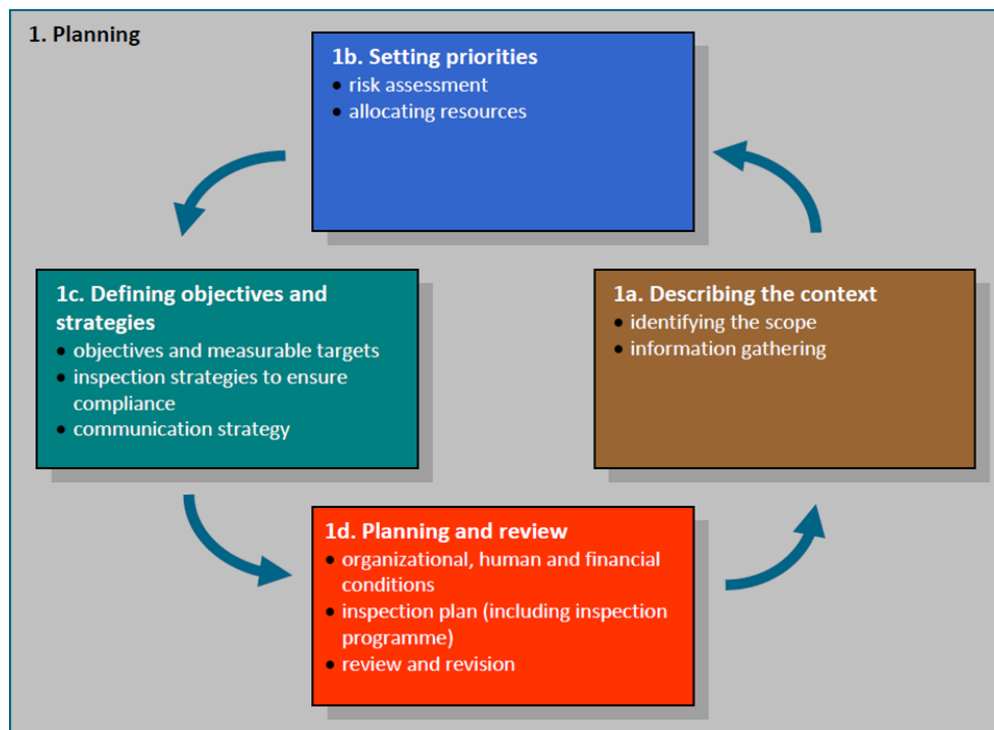


Figure 1: Inspection planning cycle

4. Inspection obligations in waste treatment facilities

4.1. Environmental Inspection Body

Describe the mandate (e.g. from Environmental Authority, from Environmental laws, political mandate ecc.) of the Inspection Body to carry out inspections of waste management facilities.

4.2. Regulatory environmental requirements of waste treatment facilities

4.2.1. The Directive (EU) 2018/851 of the European Parliament and of the Council (amending Directive 2008/98/EC on waste)

Recital 17 of Directive 2018/851 states that "in order to provide operators in markets for secondary raw materials with more certainty as to the waste or non-waste status of substances or objects and to promote a level playing field, it is important that Member States take appropriate measures to ensure that waste that has undergone a recovery operation is considered to have ceased to be waste if it complies with all the conditions laid down in Article 6(1) of Directive 2008/98/EC as amended by this Directive."

Subsequently, the same Recital 17 defines some priority criteria that can be taken into consideration for the prioritization of inspection activities. Indeed, it is stipulated that:



“Such measures should include enforcement provisions to verify that waste that is considered to have ceased to be waste as a result of a recovery operation complies with the law of the Union on waste, chemicals and products, in particular prioritising:

- waste streams that pose a higher risk to human health and the environment due to the nature and volume of those waste streams,*
- waste that is subject to innovative recovery processes or*
- waste that is recovered for subsequent further use in other Member States”.*

In addition, Art. 6 c.4 of Directive 2008/98 states that *"Where criteria have not been set at Community level under the procedure set out in paragraphs 1 and 2, Member States may decide case by case whether certain waste has ceased to be waste taking into account the applicable case law"*.

4.2.2. The IMPEL Guidelines "Guidance for regulators on enabling innovations for the circular economy (prevention and recycling of waste)"

This IMPEL Guideline contains operational tools for the construction of assessment and inspection pathways for end-of-waste processes.

One of the key steps in planning inspections in recovery facilities is risk assessment: for this purpose, priority criteria have been identified starting from those defined in Recital 17 of Directive 2018/851. The Guideline mentions the possibility of using inspection campaigns on a multi-year scale, focusing on particular waste streams. An inspection approach based on the recovery chain may also be adopted, involving multiple inspections at different stages of the chain (waste producer, recycling facility, end user).

Another option is to use a self-assessment checklist to be sent to recovery facility operators and end users and providing for an inspection visit if non-compliance is suspected.

A non-exhaustive list of criteria to be used as the basis of risk assessment is as follows (in case of Inspection plan at waste recycling facilities):

- End-of waste "Case-by-case" authorizations
- Recovery facilities that pose higher risks to human health and the environment due to the nature and volume of waste streams
- Innovative recovery processes with absence of established markets
- Recovery facilities that produce End-of-Waste shipped across national borders
- Total quantities of waste input

The methods for risk assessment of IED and non-IED facilities is described in the following chart from the IMPEL Guideline cited above.

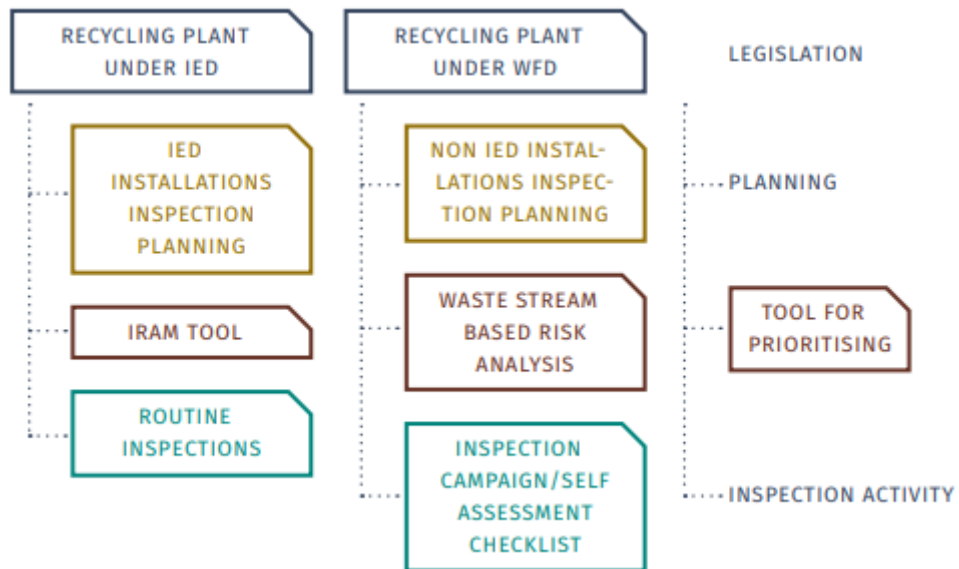


Figure 2: Inspection strategy

4.2.3. National and regional legislation

Indicate national and regional regulations setting requirements for inspections at waste treatment facilities.



5. Strategy and goals of the plan

Chapter IV "Plans related to environmental inspections" of Recommendation 331/2001, states that "*environmental inspection plans should at a minimum:*

- (a) define the geographical area of application, which may include all or part of the territory of a member state;*
- (b) cover a specific period of time, such as one year;*
- (c) provide specific review provisions;*
- (d) indicate the specific sites or types of controlled facilities involved;*
- (e) provide programs for routine environmental inspections, taking into account environmental risks; these programs should include, where appropriate, the frequency of site visits for the various types of controlled facilities specified."*

5.1. Describing the context: Area of application and validity period

Describe and indicate the geographical area for which the Inspection Body is competent.

This Plan of Inspections refers, as an area of interest, to the entire territory of the region of xxxx *(indicate the territory of competence)*.

The duration of the plan will be xxxx years, within which the target values of its monitoring indicators are defined. Planned activities are those to be hold between the 1/1/20yy and the 31/12/20zz.

This strategic plan may be revised if, following the analysis of the indicators and the development of the programme, it is deemed as necessary.

The Plan declines the following control actions assigned to the inspection body in the period xxxx:

Performance by the inspection body of routine and non-routine inspections to verify the correctness of the management of recovery facilities and compliance with the standards that identify the characteristics of recycled materials and products.

5.2. Facilities covered by the Inspection Plan

This inspection plan covers *all waste treatment facilities/specific facilities* in the territory.

It is up to the Inspection Body to decide the scope of the Plan which can be broader and extended to: Landfills, Municipal Waste facilities, Hazardous waste, Physiochemical stabilization, Animal by-products (ABP) not intended for human consumption etc.

An official list and mapping of waste facilities must be available. This map needs to be updated frequently. The resulting list is taken as the basis for planning inspection activities, although it is considered not free of possible information gaps.



Specific waste streams can be identified (CDW, textiles, plastic, paper, solvents, bio-waste, manure, sludge, contaminated soil, ashes, ELV, WEEE etc) to provide an official mapping of waste recovery facilities.

| Waste recycling facilities | TPOLOGY (CDW, ELV, WEEE, Biowaste, plastic, etc) | LOCATION | STATUS (active, inactive) |
|----------------------------|--|----------|---------------------------|
| | | | |
| | | | |
| | | | |
| TOTAL | | | |

The complete list of waste facilities covered by the plan, associated with the relevant information, is given in Annex 1.

5.3. Human resources

Indicate the organization, structure and human resources available at the inspectorate (heads, coordinators, inspectors, administrative staff).

Add the organization chart of the Inspection Body to present the structure of the organization and indicate the available resources:

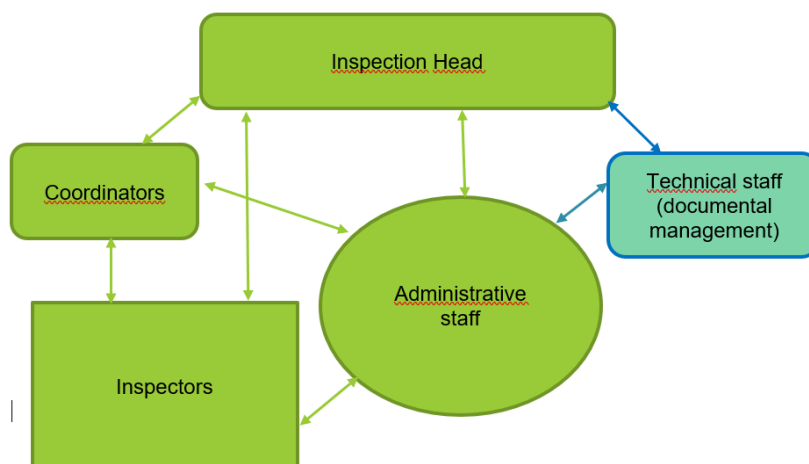


Figure 3: Structure of the Organization

The personnel involved in inspection activities on waste treatment facilities is/is not exclusively dedicated to this activity. For proper planning, it is necessary to assess the available staff (days/months/ % of time available for inspection activities for each person) to quantify the number of inspections that the Inspection Body can guarantee annually with regard to this activity.

5.4. Agreements with other institutions or administrative bodies

Indicate possible collaborations with other institutions as REACH authority, Permitting authority, Police, Municipalities, or others involved in the waste chain.

The following figure describes inspection activities performed by other Inspection Bodies along the waste chain, from the production to the final use.



Figure 4: Other inspection bodies along the waste chain

5.5. Instrumental resources

The Inspection Body has got the following resources to carry out inspections of waste recovery facilities (list the relevant instrumental resources available at the Inspection Body):



- Accredited laboratories for environmental analysis (water discharge, leachate, waste, air emission etc)
- IT applications
- Sampling equipment
- Drones
- Cars
- PC and printers
- Mobile phones
- Personal Protective Equipment (PPE): gloves, gowns, safety shoes, shoe covers, head covers, masks, respirators, eye protection, face shields, goggles, high-visibility clothing or vests, welding PPE such as helmets and and flame-resistant clothing
- xxxx

5.6. Service procurement from the private sector

Indicate and quantify possible outsourcing contracts to service companies:

- *Sampling*
- *Laboratories*
- *Inspection quality management*
- *IT development*
- *Aerial imagery interpretation service*
- *Conducting facilities monitoring (documentary and on-site)*

5.7. Setting priorities: systematic environmental risk assessment

The main goal of a risk assessment is to set the frequency of site visits at waste treatment facilities by the Inspection Body. By doing so the risk assessment is also a tool to prioritise the workload of the Inspecting Body. In a risk-based approach, most inspection effort will be directed to the facilities with the highest risks.

The main objective of a risk assessment is to prioritize the environmental risk of the facilities that shall be inspected. The result of the assessment is the frequency of routine inspections based on the risk classification and tasks to be performed by the Inspection Body.

The reason for prioritizing the workload is to allocate limited resources to the controlled activities in a planned and responsible manner.



5.7.1. The tool used: IRAM

The *Integrated Risk Assessment Method* (IRAM) methodology, developed within the IMPEL network's Easy Tools project, was used in this Plan (for a description of the methodology see document easyTools - Risk Assessment Guidance Book¹).

Risk is always defined as a function of the severity of the consequence (effect) and the probability that this consequence will happen

Risk = f (effect, probability).

The effect depends on the source (how impactful is it?) and the receptor (how vulnerable is it?) and is represented in the IRAM methodology by the impact criteria, which measure the impact of the source on the receptor.

Probability is considered as a function of the level of management and regulatory compliance and is considered in the methodology through the operator's performance criteria.

Thus, in the IRAM methodology, a distinction is made between impact criteria, performance or probability criteria, and risk category. Risk criteria scores are directly related to the risk category and thus to inspection frequencies. The highest inspection frequency is correlated with a certain number of maximum scores achieved in the impact criteria, the value of which is preliminarily defined by the inspection coordinator.

Impact criteria are used to determine possible impacts on the environment and human health; they were identified as follows:

(The following list of criteria can be taken as an example: further criteria can be identified by the Inspection Body)

| n. | Impact Criteria | Item |
|-------------|--|---|
| Criterion 1 | Type of facility | Authorization type that defines its complexity and degree of innovation |
| Criterion 2 | Impact on human health and the environment | Evidence of incidents of environmental significance |
| Criterion 3 | Quantity of waste input (HW and NHW) | Quantity and type of waste input authorized |
| Criterion 4 | Transfrontier shipment of waste | Cross-border effect |

¹ Visit the following link: [Supporting the Implementation of the Integrated Risk Assessment Method \(IRAM\) - Impel](#)



| | | |
|-------------|--|--|
| Criterion 5 | Sensitivity of the surrounding environment | Proximity to sensitive areas |
| Criterion 6 | Social perception | Media attention and criticality felt by the population |
| Criterion 7 | Emissions to the environment | Quantity and type of emissions in the air or water |

Performance (or probability) criteria, on the other hand, are used to establish a measure of the likelihood that an impact may occur. The performance criteria used are as follows:

| n. | Performance Criteria | Item |
|--------------|---------------------------------|--|
| Criterion 8 | Compliance | Compliance with permit requirements |
| Criterion 9 | Environmental Management System | Presence of an EMS ² |
| Criterion 10 | Attitude of the operator | How does the operator react to non-compliances |

In the definitions of the above impact criteria, the priority criteria set forth in Recital 17 of Directive 2018/851 were taken into consideration:

- Criterion 1 considers innovative recovery processes, as case-by-case approvals are given the higher score.
- Criteria 2 and 3 consider the "*highest risks to human health and the environment due to the nature and volume of waste streams.*"
- Criterion 4 considers "*waste recovered for further subsequent use in other member states.*"

The combination of impact and performance criteria describes the environmental and health risks attributable to the industrial facility being inspected.

The methodology is based on the following principles:

- 1) The inspection frequency is determined by the value of the highest score achieved.
- 2) The inspection frequency is reduced by one category if the minimum number of highest scores is not met.
- 3) The inspection frequency is varied according to the operator's performance criteria.

² According to Art.34 of WFD: *Member States may take account of registrations obtained under the Community Eco-Management and Audit Scheme (EMAS), in particular regarding the frequency and intensity of inspections.*



A description of IRAM and the access to the internet application of IRAM can be found here:
<https://iram-impel.nrw.de/lip/authenticate.do>

Annex 3 shows the evaluation grids for the criteria defined above.

The results of this Plan, flowing from a coherent and strategic analysis, should be the subject of consultation with the Permitting Authorities with which synergies and modes of intervention can be agreed upon.

5.7.2. Results of risk assessment

The application of the risk assessment methodology will allow to calculate the frequency of inspections to the controlled facilities to be adapted to their potential risk to the environment. The result of the risk assessment defines the frequency of the inspection; it does not give information about the time required to conduct the inspection, which is related to the complexity of the facility; each facility is then accompanied by an inspection profile, consisting of the weighted scores for each of the identified criteria.

Annex 2 shows the details of the risk assessment outcomes and the distribution of facilities in the different risk classes (high, medium and low risk).

5.8. Strategy

Inspections at waste facilities can be basically divided into three possible modes:

- Analysis of questionnaires sent to facility operators for verification of compliance with requirements.
- Periodic analysis of self-monitoring data and reports sent by, or on behalf of the facility operator.
- On-site inspection.

The inspectorate activities encompass modes such as:

- Site audits and inspections
- Desk-based assessments
- Water sampling and analysis
- Waste and product sampling and analytics
- Air emissions monitoring
- Remote compliance assessments
- Odour/Noise assessments/monitoring
- Specialist investigations, e.g. drone surveys

A proper definition of inspection frequencies necessarily starts with a quantification of available working hours and a rough estimate of the effort required to carry out an inspection activity.



The inspection shall be routine: those carried out regularly, when scheduled within this Inspection Plan, or it can be non-routine, when determined by non-compliant situations or reports.

The strategy for promoting compliance also includes holding technical meetings with operators and sending self-assessment questionnaires to operators.

An initial proposed definition of the frequency of site inspection activities and analysis of self-monitoring reports and questionnaires received, associated with each risk class, is identified in the table below; it may be modified based on the outcomes of the inspections or the available resources:

| Risk class | no. facilities | Frequency of site inspections | Self-monitoring verification | Questionnaire submission ³ |
|------------|----------------|-------------------------------|------------------------------|---------------------------------------|
| high risk | | Every X years ⁴ | On the visit | YES- |
| medium | | Every Y years | On the visit | YES- |
| low | | Only non-routine | On request | YES |

For low-risk facilities, as a result of the limited staff that does not allow to cope with the entire workload, in order to ensure the most widespread control over the authorized facilities, it is conceivable sending (e.g., every three years) questionnaires of self-assessment of compliance with the requirements of the Permit, referring to possible non-routine on-site inspections in the case of non-compliance or critical issues found.

For medium-risk facilities (class 2), the inspection frequency is proposed as every four or five years.

For high-risk facilities (class 1), the inspection frequency is proposed every 1, 2 or 3 years even not being IPPC installations. It should be compared with that defined for IED facilities (annual frequency high risk class and every three years for low risk class, as defined in the Industrial Emission Directive).

³ The frequency of sending the Self-Assessment Questionnaire, if any, is to be evaluated, also in relation to the human resources available to analyse the responses. The Self-Assessment Questionnaire should be designed to be easily integrated in an on-line application for self-monitoring and automatic assessment of data. The frequency of this self-reporting tool should be yearly. Data obtained could be used to update IRAM calculation automatically.

⁴ High risk facilities would be inspected every 1, 2 or 3 years even not being IPPC installations



The outcomes of the risk assessment, combined with available human resources, will guide annual planning. A discrepancy can occur between the number of facilities to be inspected in each year and the available human resources, resulting in the ability to carry out inspection activities on a small percentage of the facilities present. In this case the steering mechanisms of IRAM can be used.

Programming can then be oriented along four priorities:

1. Facilities without appropriate activity permit or licence should be inspected or monitored and enforced straight away.
2. Carry out inspection visits on facilities classified as high risk.
3. Annually target inspection visits to a specific type of recovery facility (e.g., CDW, textiles, WEEE, etc.) to have more information that will allow for an overall assessment of the system's weaknesses and strengths.
4. Give relevance to the Self-Assessment Questionnaire to:
 - obtain information with a minimum annual frequency from the whole sector
 - design the questionnaire(s) so that it can be used in computer applications
 - use these data for calculation with IRAM
 - calculate the degree of compliance with their obligations
 - focus on the facilities and critical aspects to be inspected

Inspections on end-of-waste are usually performed at the recycling facility. Nevertheless, the assessment of compliance with Article 6 of the WFD 2018 (conditions or criteria) can be carried out at different stages of the recycling chain⁵.

⁵ IMPEL Guidance Making the Circular Economy Work

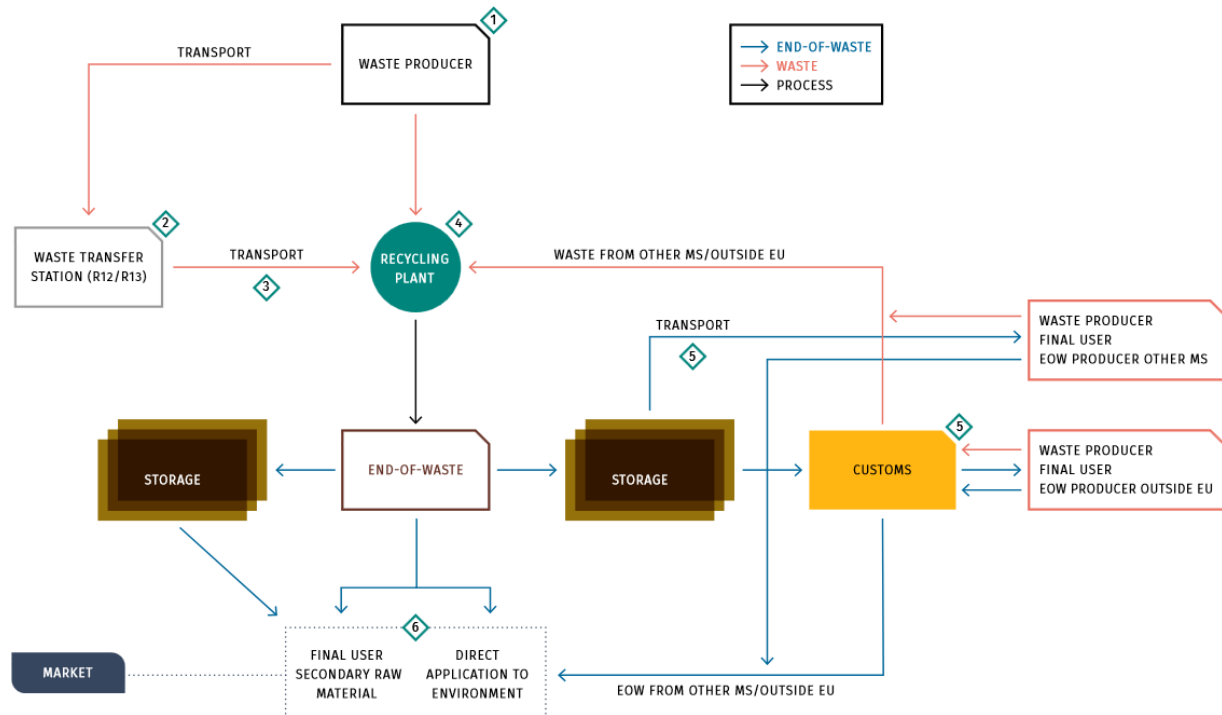


Figure 5: Recovery chain and possible inspection stages

5.8.1. Key Environmental Issues (KEI) of waste facilities

Not all environmental issues of a waste activity have the same relevance.

The identification of KEIs, which is related to the facility and its environmental features, could allow to simplify inspections and improve efficiency.

Inspections could be limited to the most relevant environmental issues of a facility (KEI). Waste treatment facilities present risks of soil, surface and ground water and air pollution. To estimate the time required to conduct the inspection, which is related to the complexity of the facility a profile can be drawn up for each facility, considering environmental features, highlighting the most relevant environmental issues of the facility (KEI).

The storage of tyres, plastics, paper and municipal waste has a high risk of fire; biological organic waste can produce odours, biological contamination, eutrophication of water. Incineration activities will be potentially more polluting to the atmosphere, with dioxins, furans and POPs.



Landfills can cause soil and water contamination, highly polluting leachate, diffuse fly-tipping, odours, greenhouse gas emissions, and other environmental problems.

Likewise, self-monitoring reports facilitate environmental monitoring and allow us to focus efforts on the most serious and recurrent problems. Inspections will be performed sticking to protocols and standardized checklist.

In addition the risk assessment done with IRAM gives as a result the KEI within its inspection profile.

5.8.2. Accountability by operators

Assessing operators' good reporting practices and environmental management systems will allow inspectorates to build on self-reporting from cooperating operators and to focus their efforts on opportunistic and obstructive operators.

Operators should be bound to collaborate sending regular Self-Assessment Questionnaires and compliance reports with a minimum annual frequency.

The Self-Assessment Questionnaires should be designed to be easily integrated with on-line applications for self-monitoring and automatic assessment of data.

Data obtained should be used to:

- update IRAM calculation automatically
- evaluate the environmental performance
- the consistency of the data reported should be evaluated

The Self-Assessment Questionnaire will be also relevant to:

- obtain information with a minimum annual frequency from the whole sector
- design the questionnaire(s) so that it can be used in computer applications
- use these data for calculation with IRAM
- calculate the degree of compliance with their obligations
- focus on the facilities and critical aspects to be inspected

Promoting compliance can also include holding technical meetings with managers and sending self-assessment questionnaires to managers.

Operator's behaviour could be classified as:

A. Well-meaning B. Indifferent C. Calculating D. Notorious/criminal

It is also important to consider some aggravating circumstances when detecting non-compliance in order to reinforce enforcement measures:

- Irreversible consequences



- Recidivism
- Financial gain
- Combination with other relevant punishable offences, i.e. financial laundering, public health, work safety, etc.
- Facilitators (i.e. key industry figures who intentionally facilitate non-compliance)

5.9. The Inspection Program

The Inspection Program must be prepared annually until December 31.

This Program includes:

- The setting of Plan objectives and targets
- The establishment of the schedule of inspection activities within which to define the following information:
 - Facility data (type, municipality, permit issuance date)
 - Risk class
 - Date of the last inspection performed
 - Instrumentation and equipment needed
 - Type of inspection (sampling, integrated inspection - administrative, technical, management)
 - Inspection regime (routine, non-routine)
 - Composition of the inspection team
 - Time required for conducting the inspection

To reduce or eliminate unnecessary or disproportionate duplication, the program will be preliminarily shared with the Competent Authorities and other Inspection bodies having control competencies over the permits issued.

5.10. Objectives and targets

Environmental inspections are generally aimed at improving the state of the environment and ensuring compliance with environmental regulations by controlled industrial activities.

Objectives can be defined on different scales, and they must be measurable to assess both the inspection body's performance and the effect of control activities on the external environment.

5.10.1. Objectives

The objectives the Inspection body has set are listed below:



THE INSPECTION BODY INTERNAL SHORT- TO MEDIUM-TERM OBJECTIVES

| | |
|----|--|
| A. | Ensure that routine operations are carried out on waste facilities according to the frequencies arising from the risk assessment, which will allow verification of the correctness of their management and compliance with the permit. Verification of compliance to the standards that identify the characteristics of recycled materials and products (EoW), and the reduction of final treatment as disposal and incineration. |
| B. | Ensure that non routine inspections are carried out because of complaints, incidents, accidents or other emergencies. |
| C. | Performing sampling and laboratory analysis to check compliance. |
| D. | Improving inspectors' skills and uniform inspection procedures and methods. |

GENERAL MEDIUM- TO LONG-TERM OBJECTIVES

| | |
|----|--|
| A. | Decreasing percentage of waste sent for disposal and maximizing waste recovered. |
| B. | Compliance with environmental regulations and issued permits; decrease in the number of infractions. |
| C. | Decrease in the number of accidents, incidents and emissions. |

5.10.2. Target and indicators

Objectives must be able to be measurable, through the definition of indicators and targets, to enable quantification of the baseline situation to be acquired.

Therefore, groups of indicators can be set to monitor and evaluate the activities of the Inspection Body and its effects. The types of indicators identified are as follows:

Input indicators: these are indicators related to available resources and control commitments done.

Output indicators: these are indicators related to the type of inspection conducted and the quantity of activities carried out by the Inspection Body. These are indicators that measure the performance of the Inspection Body. Annual targets will need to be reformulated within each Annual Program.



Outcome indicators: these are indicators related to the expected effects of the Inspection Body inspection action, the changes it aims to achieve without being able to have direct control over them. They aim to verify changes in the environmental impacts of industrial activities, which are indirectly jointly affected by the effect of inspection and permitting action.

The table below details the indicators with target benchmarks:

| INPUT INDICATORS | | |
|-------------------------|---|------------------|
| QUANTITY | Total number of waste recovery facilities | To be quantified |
| RESOURCES AVAILABLE | Number of available inspectors and days/month | To be quantified |
| TRAINING | Training days conducted x individual inspector | To be quantified |
| COSTS | Costs for staff, equipment and travel | To be quantified |
| OUTPUT INDICATORS | | |
| WASTE FACILITIES | Number of routine inspections conducted on-site / no. of routine inspections under the Plan (%) | |
| | Number of complaints handled / no. of complaints received (%) | |
| | Number of non-routine inspections carried out on site | |
| | Number of self-assessment questionnaires analysed / no. of questionnaires received | |
| | Number of analytical checks carried out / no. routine inspections carried out on site | |
| RESPONSE | Number of requirements, number of warning letters, fines and criminal investigations | |
| OUTCOME INDICATORS | | |
| GENERAL OBJECTIVE | Medium to long term target | |
| LEVEL OF COMPLIANCE (*) | No. of non-compliances found / no. of facilities inspected | Declining trend |



| | | |
|---|--|------------------|
| | No. of actions (warnings, sanctions, etc.) taken by the Competent Authority because of non-compliances found | Declining trend |
| BAT | Number of facilities in full compliance with BAT | Increasing trend |
| CIRCULAR ECONOMY | Decreasing percentage of waste sent for disposal and maximizing waste recovered | Increasing trend |
| IMPROVEMENT OF THE STATE OF THE ENVIRONMENT | No. of accidents and exposures | Declining trend |

(*) Indicators relevant to these general objectives may be developed either on a facility-by-facility basis or on a global level (all facilities); in both cases the expected target is a decrease in the trend over the years.

6. Performance monitoring and plan review

Performance monitoring is essential for assessing the degree of achievement of the goals set in the Plan and has importance in communicating the result to the Competent Authority, Municipality, public, etc.

Therefore, systematic annual monitoring of input, output and outcome indicators will be implemented. In case deviations from the set targets are recorded, the factors that negatively impacted the results will be analysed. Evaluation of results through the performance indicators will allow for revision of the Plan both in terms of strategy (resources allocated, etc.) and objectives.

The Inspection Plan will be reviewed annually, and the Annual Inspection Program will be prepared with the same frequency.

7. Information management

An information management system is necessary for a good performance of the inspectorate. All information available and produced during the inspections will be kept available internally for future monitoring of the facilities.

This information will ease the communication to other administrative bodies and to the public.

The IT application should notify the inspector in advance of the follow-up actions to be carried out.



An inspection file is set for information and documents generated in an inspection process and registered according to the established procedures. Each file receives a code depending on the type of action and according to an established nomenclature.

Every action carried out according to the file must be recorded in the form of minutes, reports, internal notes, emails, documentation provided, etc, until its closure.

8. Training needs

The Inspection body shall ensure and develop the knowledge and skills required of inspectors through education, training and maintenance of acquired knowledge, with the aim of pursuing levels of homogeneity at the regional level.

For this purpose, the environmental inspectors will have training on:

- Working alongside experienced environmental inspectors
- Training on issuing written notices of violation, and participating in enforcement hearings
- Criminal offenses subsequent litigation activities and the penalty system
- The use of sampling instrumentation
- Inspection procedures and records
- Waste categories, to check how they are handled, stored, and disposed in accordance with regulations
- Cessation of waste status (End of Waste)
- Safety protocols



Annexes



Annex I. Inventory of waste facilities

| FACILITY | WASTE STREAMS | LOCATION | IED/WFD PERMIT |
|----------|---------------|----------|----------------|
| | | | |
| | | | |
| | | | |



Annex II. Results of risk assessment

The results of the risk assessment shall be put together in a table with name of the facility and inspection frequency but not the date of the next inspection because this table, the inspection programme, shall be put on the internet and be updated every year.

| INSPECTION OBJECT IDENTIFICATION | | | Assessment Results | | | |
|----------------------------------|------|----------|--------------------|------------------------------|-----------------------|------------------|
| WASTE STREAM | AREA | FACILITY | Risk Category | Inspection frequency (month) | Inspection effort (%) | Inspection hours |
| Sludge recovery spreading | | xxxx | 3 | 36 | 47 | 46,8 |
| ELV | | | 3 | 36 | 34 | 46,8 |
| Biowaste | | | 3 | 36 | 43 | 46,8 |
| Metals | | | 3 | 36 | 38 | 46,8 |
| ELV | | | 3 | 36 | 38 | 46,8 |
| C&D | | | 3 | 36 | 34 | 46,8 |

| Risk Category | No. Facilities |
|-------------------------|----------------|
| Class 1 (HIGH RISK) | |
| Class 2 (MEDIUM RISK) | |
| Class 3 (LOW RISK) | |
| TOTAL FACILITIES | |



Annex III. Evaluation grids (example for waste recycling facilities)

IMPACT CRITERIA

| Criterion 1: Type of facility | |
|-------------------------------|--|
| Score | Definition |
| 0 | R13 storage only facility |
| 1 | R12-R13 authorized facility (storage only) |
| 2 | Permit under simplified procedure |
| 3 | WFD permit |
| 4 | IED EoW facility (EU or national EoW regulation) |
| 5 | IED case-by-case EoW facility |

| Criterion 2: Impact on human health and the environment. | |
|--|---|
| Score | Definition |
| 0 | No environmental incidents in the past 5 years |
| 1 | Evidence of incidents of minor environmental significance in the past 5 years |
| 2 | Evidence of incidents of minor environmental significance in the past 2 years |
| 3 | Evidence of incidents of environmental significance in the past 5 years |
| 4 | Evidence of incidents of serious environmental significance in the past 5 years |
| 5 | Evidence of incidents of serious environmental significance in the past 2 years |

| Criterion 3: Quantity of waste input (HW and NHW). | |
|--|--|
| Score | Definition |
| 0 | Up to 500 t/year of NHW |
| 1 | NHW < 2000 t/year and/or HW < 2 t/year |
| 2 | NHW > 2000 t/year and/or HW > 2 t/year |
| 3 | NHW > 50000 t/year and/or HW > 1000 t/year |
| 4 | NHW > 100000 t/year and/or HW > 5000 t/year |
| 5 | NHW > 250000 t/year and/or HW > 10000 t/year |

| Criterion 4: Transfrontier shipment of Waste | |
|--|------------|
| Score | Definition |



| | |
|---|--|
| 0 | None |
| 1 | Waste transport only in the controlled region |
| 2 | |
| 3 | Inbound or outbound within the country but outside the controlled region |
| 4 | Inbound or outbound within the EU |
| 5 | Inbound or outbound outside the EU |

Criterion 5: Sensitivity of the surrounding environment

| Score | Definition |
|-------|--|
| 0 | No sensitive areas (Natura 2000 areas, parks, etc.) or urban center nearby or at distance greater than 10 km |
| 1 | Urban center or Sensitive areas outside the sphere of influence of emissions or at a distance <10 km |
| 2 | Urban center or Sensitive areas within the sphere of influence of emissions or at a distance < 5 km |
| 3 | Urban center or Sensitive areas within the sphere of influence of any incidents or at a distance < 1.5 km |
| 4 | Urban center or Sensitive areas near the facility, distance < 100 m |
| 5 | The facility is located inside a sensitive area or urban center or in close proximity. |

Criterion 6: Social Perception

| Score | Definition |
|-------|---|
| 0 | No complaints |
| 1 | Only minor or unsubstantiated complaints |
| 2 | Minor substantiated complaints |
| 3 | Complaints that need the attention of the inspection body |
| 4 | Serious complaints from different sources |
| 5 | Serious complaints and media attention |

Criterion 7: Emission to the Environment

| Score | Definition |
|-------|---|
| 0 | No emissions to air/water |
| 1 | Diffuse emissions of NH pollutant |
| 2 | Focus emissions of NH pollutant |
| 3 | Emissions from hazardous waste treatment |
| 4 | Emissions of hazardous substances (Regulation (EC) No 1907/2006) ⁶ |
| 5 | Persistent Organic Pollutants (POPs) and substances of very high concern (SVHCs) ⁷ |



OPERATOR PERFORMANCE RISK CRITERIA

Criterion 8: Compliance

| Score | Definition |
|-------|--|
| -1 | Compliance with permit and other legal requirements |
| 0 | Compliance with permit but not with other legal requirements |
| 1 | Non-compliance with permit requirements of administrative and/or criminal nature |

Criterion 9 Environmental Management System

| Score | Definition |
|-------|---|
| -1 | The facility is EMAS registered or ISO 14001 certified |
| 0 | The facility is governed according to an EMS approved by the CA but not certified or lack of data |
| 1 | The facility does not have an EMS |

Criterion 10: Attitude of the operator

| Score | Definition |
|-------|--|
| -1 | The operator reacts pro-actively on non-compliances and informs the Inspection Body/Competent Authority |
| 0 | The operator only reacts on non-compliances when asked by the Inspection Body/Competent Authority |
| 1 | The operator only reacts on non-compliances when he is forced by the Inspection Body/Competent Authority |